

Midterm practice: Factor quadratic, $a = \text{prime}$.

You should try to factor the expression. I recommend guess-and-check. If that is giving you too much trouble, try figuring out how you can use quadratic formula.

1. If n is an integer and $(x + n)$ is a factor of polynomial $3x^2 - 10x + 3$ then what is the value of n ?
2. If n is an integer and $(x + n)$ is a factor of polynomial $7x^2 + 18x + 8$ then what is the value of n ?
3. If n is an integer and $(x + n)$ is a factor of polynomial $7x^2 - x - 6$ then what is the value of n ?
4. If n is an integer and $(x + n)$ is a factor of polynomial $3x^2 + 7x + 2$ then what is the value of n ?
5. If n is an integer and $(x + n)$ is a factor of polynomial $3x^2 - 7x - 10$ then what is the value of n ?
6. If n is an integer and $(x + n)$ is a factor of polynomial $2x^2 + 9x - 5$ then what is the value of n ?
7. If n is an integer and $(x + n)$ is a factor of polynomial $7x^2 + 9x + 2$ then what is the value of n ?
8. If n is an integer and $(x + n)$ is a factor of polynomial $7x^2 + x - 6$ then what is the value of n ?
9. If n is an integer and $(x + n)$ is a factor of polynomial $2x^2 - 5x - 12$ then what is the value of n ?
10. If n is an integer and $(x + n)$ is a factor of polynomial $5x^2 - 4x - 9$ then what is the value of n ?
11. If n is an integer and $(x + n)$ is a factor of polynomial $5x^2 - 12x + 7$ then what is the value of n ?
12. If n is an integer and $(x + n)$ is a factor of polynomial $2x^2 - 3x - 2$ then what is the value of n ?
13. If n is an integer and $(x + n)$ is a factor of polynomial $5x^2 - 19x + 18$ then what is the value of n ?
14. If n is an integer and $(x + n)$ is a factor of polynomial $7x^2 - x - 8$ then what is the value of n ?
15. If n is an integer and $(x + n)$ is a factor of polynomial $7x^2 + 3x - 4$ then what is the value of n ?
16. If n is an integer and $(x + n)$ is a factor of polynomial $2x^2 + x - 15$ then what is the value of n ?
17. If n is an integer and $(x + n)$ is a factor of polynomial $2x^2 + 5x - 3$ then what is the value of n ?
18. If n is an integer and $(x + n)$ is a factor of polynomial $2x^2 + 9x + 10$ then what is the value of n ?
19. If n is an integer and $(x + n)$ is a factor of polynomial $3x^2 + 5x - 8$ then what is the value of n ?
20. If n is an integer and $(x + n)$ is a factor of polynomial $7x^2 - 15x + 2$ then what is the value of n ?

5. Factors as $(x + 1)(3x - 10)$ so $n = 1$

16. Factors as $(x + 3)(2x - 5)$ so $n = 3$

20. Factors as $(x - 2)(7x - 1)$ so $n = -2$

9. Factors as $(x - 4)(2x + 3)$ so $n = -4$

11. Factors as $(x - 1)(5x - 7)$ so $n = -1$

14. Factors as $(x + 1)(7x - 8)$ so $n = 1$

8. Factors as $(x + 1)(7x - 6)$ so $n = 1$

18. Factors as $(x + 2)(2x + 5)$ so $n = 2$

10. Factors as $(x + 1)(5x - 9)$ so $n = 1$

1. Factors as $(x - 3)(3x - 1)$ so $n = -3$

13. Factors as $(x - 2)(5x - 9)$ so $n = -2$

3. Factors as $(x - 1)(7x + 6)$ so $n = -1$

2. Factors as $(x + 2)(7x + 4)$ so $n = 2$

7. Factors as $(x + 1)(7x + 2)$ so $n = 1$

12. Factors as $(x - 2)(2x + 1)$ so $n = -2$

17. Factors as $(x + 3)(2x - 1)$ so $n = 3$

4. Factors as $(x + 2)(3x + 1)$ so $n = 2$

15. Factors as $(x + 1)(7x - 4)$ so $n = 1$

19. Factors as $(x - 1)(3x + 8)$ so $n = -1$

6. Factors as $(x + 5)(2x - 1)$ so $n = 5$